

## II. CLAIM AMENDMENTS

1-39. Cancelled

40. (Currently amended) A method ~~for reducing visual artefacts in of encoding a~~ digital image comprising a plurality of image blocks, the method comprising:

decoding a first encoded image block;

~~in which image blocks are encoded to form encoded image blocks and said encoded image blocks are subsequently decoded to form decoded image blocks, each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value and~~  
performing a filtering is performed to reduce visual artefacts due to operation across a block boundary between a current~~the first~~ decoded image block and  
~~a previously decoded image block adjacent to the current first decoded image block such that the pixel value of at least one reconstructed decoded pixel in at least one of said current~~the first ~~decoded image block and said previously decoded image block is modified by the filtering operation; and~~

performing a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the ~~to produce a modified pixel value, wherein said modified pixel value is made available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded~~of the first decoded image block by the filtering operation.

41. (Cancelled)

42. (Currently amended) A method according to claim 41, wherein the decoding of an~~the first encoded~~ image block comprises performing to form a decoded

~~image block is performed using motion compensated prediction with respect to a reference image using said modified pixel value.~~

43. (Cancelled)

44. (Currently amended) A method according to claim 40, wherein decoding of ~~an the first~~ encoded image block to form a decoded image block ~~is comprises performed performing using intra~~ prediction with reference to a previously ~~de~~encoded and subsequently decoded image block of the digital image using said modified pixel value adjacent to the first block.

45. (Currently amended) A method according to claim 40, wherein ~~modification of the value of at least one reconstructed pixel in at least one of said current decoded image block and said previously decoded image block by the~~ filtering operation across the boundary between the first decoded image block and the previously decoded image block is performed immediately after the ~~current first image block is decoded image block is formed and a boundary exists between said current decoded image block and said previously decoded image block.~~

46. (Currently amended) A method according to claim 40, wherein filtering to ~~reduce visual artefacts due to~~operation across the a boundary between a ~~current~~the first decoded image block and a previously decoded image block adjacent to the ~~current first~~ decoded image block is performed before performing the prediction for the second block~~all blocks of the digital image are decoded.~~

47. (Currently amended) A method according to claim 40, wherein filtering is performed to ~~reduce visual artefacts due to~~ more than one boundary between the ~~current first~~ decoded image block and previously decoded image blocks adjacent to the ~~current first~~ decoded image block.

48. (Currently amended) A method according to claim 47, wherein filtering to ~~reduce visual artefacts due to said~~ more than one boundary is performed

sequentially on ~~said~~ more than one boundary in a certain boundary scanning order.

49. (Currently amended) A method according to claim 48, wherein the order of filtering boundaries is selected such that a boundary to the left of the ~~current~~ first decoded image block is filtered before a boundary to the top of the ~~current~~ first decoded image block.

50.-51. (Cancelled).

52. (Currently amended) A method according to claim 40, wherein ~~for reducing visual artefacts in a digital image comprising a plurality of image blocks, which are grouped into macroblocks, in which image blocks are encoded to form encoded image blocks and said encoded image blocks are subsequently decoded to form decoded image blocks, each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value and filtering is performed to reduce visual artefacts due to a boundary between a current decoded image block and a previously decoded image block adjacent to the current decoded image block is performed~~ such that the pixel value of at least one reconstructed pixel in at least one of said current decoded image block and said previously decoded image block is modified by filtering to produce a modified pixel value, wherein the digital image is filtered macroblock by macroblock according to a certain macroblock scanning order and that said modified pixel value is made available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded image block.

53. (Cancelled).

54. (Currently amended) A method according to claim 52, wherein filtering to ~~reduce visual artefacts due to a boundary between a current decoded image block and a previously decoded image block adjacent to the current decoded image~~ block is performed for all boundaries within a macroblock before filtering to reduce

visual artefacts~~artifacts~~ is performed within the next macroblock in the macroblock scanning order.

55. (Currently amended) A method according to claim 40, wherein the digital image comprises ~~at least one~~ a plurality of segments of image blocks and only boundaries between adjacent decoded image blocks that belong to the same segment are filtered.

56.-57. (Cancelled).

58. (Currently amended) An encoder for encoding a digital image comprising a plurality of image blocks, the encoder ~~comprising~~configured to:

~~means for encoding~~ a first image blocks to form a first enencoded image block;

~~s and means for subsequently decoding~~ said the first encoded image blocks to form a first decoded image block;

~~the encoder comprising s, each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value, the encoder comprising a filter arranged to perform a filtering operation across for reducing visual artefacts due to a block boundary between a currentthe first decoded image block and a previously decoded image block adjacent to the current-first decoded image block, said filter being arranged to modifysuch that a the pixel value of at least one reconstructed-decoded pixel in at least one of said currentthe first decoded image block and said previously decoded image block by filtering to produce a is modified by pixel value, wherein the encoder is arranged to make said modified pixel value available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded image blockthe filtering operation; and~~

the encoder further configured to perform a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first block by the filtering operation.

59. (Currently amended) An encoder according to claim 58, wherein ~~said-the encoder is configured to means for encoding~~ the first image block ~~image blocks to form encoded image blocks is arranged to by~~ form an encoded image block by performing motion compensated prediction with respect to a reference image using ~~said modified pixel value.~~

60. (Currently amended) An encoder according to claim 58, wherein ~~said-the means-encoder is configured to for encoding~~ the first image blocks to form encoded image blocks is arranged to by form an encoded image block by performing intra-prediction with reference to a previously encoded image block and ~~subsequently decoded image block of the digital image using said modified pixel value~~ adjacent to the first block.

61. (Currently amended) An encoder according to claim 58, wherein ~~said-the filter is arranged to modify the value of at least one reconstructed pixel in at least one of said current decoded image block and said previously decoded image block~~ operate immediately after the ~~current first image block is~~ decoded image block is formed and a boundary exists between ~~said current decoded image block and said previously decoded image block.~~

62. (Currently amended) An encoder according to claim 58, wherein ~~said-the filter is arranged to reduce visual artefacts due to~~ operate due to more than one boundary between ~~said-the current first decoded image block and previously decoded image blocks adjacent to the current first decoded image block.~~

63. (Currently amended) An encoder according to claim 62, wherein the filter is arranged to ~~reduce visual artefacts~~ operate due to ~~said more than one boundary by~~ filtering the boundaries sequentially in a certain boundary scanning order.

64. (Currently amended) An encoder according to claim 58, wherein the filter is arranged to use ~~said the~~ modified pixel value ~~when reducing visual artefacts due to~~ at least one other boundary between decoded image blocks.

65. (Currently amended) An encoder ~~according to claim 58, wherein for encoding a digital image comprising a plurality of image blocks which are grouped into macroblocks, and each macroblock comprising a certain number of image blocks, the encoder comprising means for encoding image blocks to form encoded image blocks and means for subsequently decoding said encoded image blocks to form decoded image blocks, each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value, the encoder comprising a~~ filter for reducing visual artefacts due to a boundary between a current decoded image block and a previously decoded image block adjacent to the current decoded image block, said filter being arranged to modify the pixel value of at least one reconstructed pixel in at least one of said current decoded image block and said previously decoded image block by filtering to produce a modified pixel value, wherein the filter is arranged to filter the image macroblock by macroblock according to a certain macroblock scanning order and the encoder is arranged to make said modified pixel value available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded image block.

66.-67. (Cancelled).

68. (Currently amended) An encoder according to claim 65, the encoder further arranged to encode and subsequently decode the image blocks of a macroblock in a certain block scanning order.

69. (Cancelled).

70. (Currently amended) An encoder according to claim 65, wherein the filter is arranged to arranged to operate ~~reduce~~ visual artefacts due to boundaries between decoded image blocks of a macroblock by filtering, according to said

~~block scanning order substantially immediately after each the first image block is~~  
~~encoded image block is decoded to form a current decoded image block and a~~  
~~boundary exists between the current decoded image block and a previously~~  
~~decoded image block adjacent to the current decoded image block.~~

71. (Currently amended) An encoder according to claim 65, wherein the filter is arranged to ~~reduce visual artefacts~~ operate due to more than one boundary between said the first ~~current~~ decoded image block and previously decoded image blocks adjacent to the ~~current~~ first decoded image blocks.

72. (Currently amended) An encoder according to claim 71, wherein the filter is further arranged to ~~reduce visual artefacts~~ operate due to said more than one boundary by filtering the boundaries sequentially in a certain boundary scanning order.

73. (Currently amended) An encoder according to claim 58, wherein the digital image comprises ~~at least one a~~ plurality of segments of image blocks and the filter is arranged to ~~reduce visual artefacts~~ operate due to boundaries between adjacent decoded image blocks that belong to the same segment.

74.-75. (Cancelled).

76. (Currently amended) A decoder for decoding an encoded digital image, ~~said encoded digital image~~ comprising a plurality of encoded image blocks, the decoder configured to:

~~and having been formed by encoding a digital image comprising a plurality of image blocks, the decoder comprising means for decoding a first~~  
~~encoded image blocks to form a first decoded image block;~~

~~s, each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value, the decoder comprising the decoder comprising a filter arranged to perform a filtering~~

~~operation across for reducing visual artefacts due to a block boundary between a current~~the first ~~decoded image block and a previously decoded image block adjacent to the current~~first ~~decoded image block, said filter being arranged to modify the~~such that ~~pixel value of at least one reconstructed decoded pixel in at least one of said current~~the first ~~decoded image block and said previously decoded image block by filtering to produce a~~is modified by the filtering operation; and

the decoder further configured to perform a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first block by the filtering operation~~pixel value, wherein the decoder is arranged to make said modified pixel value available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded image block.~~

77. (Currently amended) A decoder according to claim 76, wherein ~~said means~~the decoder is configured for to decoding the first image block ~~encoded image blocks to form decoded image blocks is arranged to form a decoded image block by performing motion compensated prediction with respect to a reference image using said modified pixel value.~~

78. (Currently amended) A decoder according to claim 76, wherein the decoder is configured to said means for decoding the first encoded ~~encoded image blocks to form decoded image blocks is arranged to form a decoded image block by performing a intra prediction with reference to a previously encoded and subsequently decoded image block of the digital image using said modified pixel value~~ adjacent to the first block.

79. (Currently amended) A decoder according to claim 76, wherein ~~said the filter is arranged to modify the value of at least one reconstructed pixel in at least one of said current decoded image block and said previously decoded image~~



~~block~~operate immediately after the ~~current-first~~ decoded image block is formed ~~decoded~~ and a boundary exists between said current decoded image block and said previously decoded image block.

80. (Currently amended) A decoder according to claim 76, wherein ~~said-the~~ filter is arranged to ~~reduce-visual-artefacts~~operate due to more than one boundary between ~~said-the first~~ current decoded image block and previously decoded image blocks adjacent to the ~~current-first~~ decoded image block.

81. (Currently amended) A decoder according to claim 80, wherein the filter is arranged to ~~reduce-visual-artefacts~~operate due to ~~said-more~~ than one boundary by filtering the boundaries sequentially in a certain boundary scanning order.

82. (Currently amended) A decoder according to claim 76, wherein the filter is arranged to use ~~said-the~~ modified pixel value ~~when-reducing-visual-artefacts~~when filtering due to at least one other boundary between decoded image blocks.

83. (Currently amended) A decoder according to claim 76, wherein for decoding ~~an encoded digital image, said encoded digital image comprising a plurality of encoded~~the ~~image blocks and having been formed by encoding a digital image comprising a plurality of image blocks, which are grouped into macroblocks, each macroblock comprising a certain number of image blocks, the decoder comprising means for decoding encoded image blocks to form decoded image blocks, each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value, the decoder comprising and~~ a filter for reducing visual artefacts due to a boundary between a current decoded image block and a previously decoded image block adjacent to the current decoded image block, said filter being arranged to modify the pixel value of at least one reconstructed pixel in at least one of said current decoded image block and said previously decoded image block by filtering to produce a modified pixel value, wherein the filter is arranged to filter the image macroblock by macroblock according to a certain macroblock scanning order and the decoder is arranged to

~~make said modified pixel value available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded image block.~~

84.-85. (Cancelled)

86. (Previously presented) A decoder according to claim 83, wherein the decoder is further arranged to decode the encoded image blocks of a macroblock in a certain block scanning order.

87. (Currently amended) A decoder according to claim 83, further arranged to decode all the encoded image blocks of a given macroblock in the macroblock scanning order before decoding the encoded image blocks of the next macroblock in the ~~macroblock scanning~~ scanning order.

88. (Currently amended) A decoder according to claim 83, wherein the filter is arranged to ~~reduce visual artefacts due to boundaries between decoded image blocks of a macroblock by filtering, according to said block scanning order~~ substantially operate immediately after ~~each encoded~~ the first encoded image block is decoded to form a current decoded image block and a boundary exists between the current decoded image block and a previously decoded image block adjacent to the current decoded image block.

89. (Currently amended) A decoder according to claim 88, wherein the filter is arranged to ~~reduce visual artefacts~~ operate due to more than one boundary between ~~said current~~ the first decoded image block and previously decoded image blocks adjacent to the ~~current~~ first decoded image block.

90. (Currently amended) A decoder according to claim 89, wherein the filter is further arranged to ~~reduce visual artefacts~~ operate due to ~~said~~ more than one boundary by filtering the boundaries sequentially in a certain boundary scanning order.

91. (Currently amended) A decoder according to claim 76, wherein the digital image comprises a plurality of at least one segments of image blocks and the filter is arranged to ~~reduce visual artefacts~~operate due to boundaries between adjacent decoded image blocks that belong to the same segment.

92.-93. (Cancelled).

94. (Currently amended) A terminal device comprising an encoder for encoding a digital image comprising a plurality of image blocks, the encoder ~~comprising~~configured to:

~~means for encoding~~ encode a first image blocks to form a first encoded image block;

~~s and means for subsequently decoding~~ said the first encoded image blocks to form a first decoded image block;

~~s, perform a filtering operation across a block~~ each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value, the encoder comprising a filter for reducing visual artefacts due to a boundary between a current the first decoded image block and a previously decoded image block adjacent to the ~~current~~ first decoded image block, ~~said filter being arranged to modify~~ such that the pixel value of at least one ~~reconstructed decoded pixel~~ in at least one of said ~~current~~ the first decoded image block and ~~said previously decoded image block by filtering to produce a~~ is modified pixel value, wherein the encoder is arranged to make ~~said modified pixel value available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded image block~~ by the filtering operation; and

perform a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the

prediction is performed based on the modified pixel value of the first block by the filtering operation.

95. (Previously presented) A terminal device according to claim 94, wherein the terminal device is a mobile terminal.

96. (Previously presented) A terminal according to claim 94, wherein the terminal device is a wireless terminal of a mobile communications system.

97. (Currently amended) A storage medium comprising a computer program for operating a computer as an encoder for encoding a digital image comprising a plurality of image blocks, which are grouped into macroblocks, each macroblock comprising a certain number of image blocks, the computer program comprising:

program code for encoding a first image blocks to form a first encoded image blocks;

program code for ~~subsequently decoding said the first~~ encoded image blocks to form a first decoded image block;s, ~~each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value;~~

program code for implementing a filtering operation ~~to reduce visual artefacts due to across a block~~ boundary between a ~~current~~the first decoded image block and a previously decoded image block adjacent to the ~~current~~first decoded image block, such that ~~the pixel value of at least one reconstructed decoded pixel in at least one of said current~~the first decoded image block and said previously decoded image block is modified by filtering to produce as modified by the filtering operation; and ~~pixel value,~~

program code for performing a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block,

wherein the prediction is performed based on the modified pixel value of the first block by the filtering operation

~~wherein the computer program comprises program code for filtering the image macroblock by macroblock according to a certain macroblock scanning order and the computer program further comprises program code for making said modified pixel value available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded image block.~~

98. (Currently amended) A storage medium comprising a computer program for operating a computer as a decoder for decoding an encoded digital image, said encoded digital image comprising a plurality of encoded image blocks and having been formed by encoding a digital image comprising a plurality of image blocks which are grouped into macroblocks, each macroblock comprising a certain number of image blocks, the computer program comprising:

program code for decoding ~~said a first~~ encoded image blocks to form a first decoded image blocks, ~~each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value;~~

program code for implementing a filtering operation ~~to reduce visual artefacts due to across a block boundary between the first a current decoded image block and a previously decoded image block adjacent to the current first~~ decoded image block such that ~~the pixel value of at least one reconstructed decoded pixel in at least one of said current the first~~ decoded image block and said previously decoded image block is modified by filtering ~~to produce a modified pixel value operation~~; and

program code for performing a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block,

wherein the prediction is performed based on the modified pixel value of the first block by the filtering operation

~~wherein the computer program comprises program code for filtering the image macroblock by macroblock according to a certain macroblock scanning order, and that the computer program further comprises program code for making said modified pixel value available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded image block.~~

99. (Currently amended) A method according to claim 52, wherein the digital image comprises ~~at least one~~ a plurality of segments of image blocks and only boundaries between adjacent decoded image blocks that belong to the same segment are filtered.

100.-101. (Cancelled).

102. (Currently amended) An encoder according to claim 65, wherein the digital image comprises ~~at least one~~ a plurality of segments of image blocks and the filter is arranged to ~~reduce visual artefacts~~ operate due to boundaries between adjacent decoded image blocks that belong to the same segment.

103.-104. (Cancelled).

105. (Currently amended) A decoder according to claim 83, wherein the digital image comprises a plurality of ~~at least one~~ segments of image blocks and the filter is arranged to ~~reduce visual artefacts~~ operate due to boundaries between adjacent decoded image blocks that belong to the same segment.

106.-107. (Cancelled).

108. (Currently amended) A terminal device comprising an encoder for encoding a digital image comprising a plurality of image blocks which are grouped into

macroblocks, each macroblock comprising a certain number of image blocks, the encoder comprising configured to:

~~means for encoding~~ a first image blocks to form a first encoded image block;

~~s and means for subsequently decoding~~ said the first encoded image blocks to form a first decoded image blocks;

~~, each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value, the encoder comprising perform a filtering operation for reducing visual artefacts due to across a block boundary between a current~~the first decoded image block and a previously decoded image block adjacent to the ~~current first~~ decoded image block, ~~said filter being arranged to modify the~~such that pixel value of at least one ~~reconstructed decoded~~ pixel in ~~at least one of said current~~the first decoded image block and ~~said previously decoded image block by filtering to produce a~~s modified pixel value~~by the filtering operation; and~~

~~, wherein the filter is arranged to filter the image macroblock by macroblock according to a certain macroblock scanning order and the encoder is arranged to make said modified pixel value available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded image block~~perform a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first block by the filtering operation.

109. (Previously presented) A terminal device according to claim 108, wherein the terminal device is a mobile terminal.

110. (Previously presented) A terminal according to claim 108, wherein the terminal device is a wireless terminal of a mobile communications system.

111. (Currently amended) A terminal device comprising a decoder for decoding an encoded digital image, said encoded digital image comprising a plurality of encoded image blocks ~~and having been formed by encoding a digital image comprising a plurality of image blocks~~, the decoder ~~comprising configured to:~~

~~means for decoding a first encoded image blocks to form a first decoded image blocks, each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value, the decoder comprising;~~

~~perform a filtering operation for reducing visual artefacts due to across a block boundary between a current the first decoded image block and a previously decoded image block adjacent to the current first decoded image block, said filter being arranged to modify the such that pixel value of at least one reconstructed decoded pixel in at least one of said current the first decoded image block and said previously decoded image block is modified by the filtering to produce a modified pixel value operation; and, wherein the decoder is arranged to make said modified pixel value available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded image block~~

~~perform a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first block by the filtering operation.~~

112. (Previously presented) A terminal device according to claim 111, wherein the terminal device is a mobile terminal.

113. (Previously presented) A terminal according to claim 111, wherein the terminal device is a wireless terminal of a mobile communications system.



114. (Currently amended) A terminal device comprising a decoder for decoding an encoded digital image, said encoded digital image comprising a plurality of encoded image blocks and ~~having been formed by encoding a digital image comprising a plurality of image blocks, which are grouped into macroblocks, each macroblock comprising a certain number of image blocks, the decoder comprising configured to:~~

~~means for decoding a first encoded image blocks to form a first decoded image block;~~

~~perform s, each decoded image block comprising a number of reconstructed pixels, each reconstructed pixel having an associated pixel value, the decoder comprising a filtering operation for reducing visual artefacts due to across a block boundary between a current the first decoded image block and a previously decoded image block adjacent to the current first decoded image block, said filter being arranged to modify the such that pixel value of at least one reconstructed decoded pixel in at least one of said current the first decoded image block and said previously decoded image block by filtering to produce a is modified pixel value by the filtering operation; and, wherein the filter is arranged to filter the image macroblock by macroblock according to a certain macroblock scanning order and the decoder is arranged to make said modified pixel value available for use in INTRA prediction of an image block within the same image as said current decoded image block and said previously decoded image block~~

~~perform a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first block by the filtering operation.~~

115. (Previously presented) A terminal device according to claim 114, wherein the terminal device is a mobile terminal.

116. (Previously presented) A terminal according to claim 114, wherein the terminal device is a wireless terminal of a mobile communications system.

117. (Cancelled)

118. (New) A method according to claim 40, wherein the prediction operation further comprises performing a prediction for at least one other pixel value of the second block based on a modified pixel value of a third block, the third block adjacent to the second image block, the modified pixel values of the third block obtained by a filtering operation performed across a block boundary between the third decoded image block and a previously decoded image block adjacent to the third block.

119. (New) An encoder according to claim 58, wherein the encoder is further configured to perform a prediction for at least one other pixel value of the second block based on a modified pixel value of a third block, the third block adjacent to the second image block, the modified pixel values of the third block obtained by a filtering operation performed across a block boundary between the third decoded image block and a previously decoded image block adjacent to the third block.

120. (New) A decoder according to claim 76, wherein the decoder is further configured to perform a prediction for at least one other pixel value of the second block based on a modified pixel value of a third block, the third block adjacent to the second image block, the modified pixel values of the third block obtained by a filtering operation performed across a block boundary between the third decoded image block and a previously decoded image block adjacent to the third block.

121. (New) A method of decoding an encoded digital image comprising a plurality of image blocks, the method comprising:

decoding a first image block;

performing a filtering operation across a block boundary between the first decoded image block and a previously decoded image block such that the pixel value of at least one decoded pixel in the first decoded image block is modified by the filtering operation; and

performing a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first block by the filtering operation.

122. (New) A method according to claim 121, wherein the decoding of the first image block comprises performing motion compensated prediction with respect to a reference image.

123. (New) A method according to claim 121, wherein the decoding of the first image block comprises performing prediction with reference to a previously coded image block adjacent to the first block.

124. (New) A method according to claim 121, wherein the filtering operation across the boundary between the first decoded image block and the previously decoded image block is performed immediately after the first image block is decoded.

125. (New) A method according to claim 121, wherein the filtering operation across the boundary between the first decoded image block and the previously decoded image block is performed immediately before performing the prediction for the second block.

126. (New) A method according to claim 121, wherein the filtering operation is performed due to more than one boundary between the first decoded image block and previously decoded image blocks adjacent to the first decoded image block.

127. (New) A method according to claim 121, wherein the prediction operation further comprises performing a prediction for at least one other pixel value of the second block based on a modified pixel value of a third block, the third block adjacent to the second image block, the modified pixel values of the third block obtained by a filtering operation performed across a block boundary between the third decoded image block and a previously decoded image block adjacent to the third block.

128. (New) A method according to claim 121, wherein the image blocks are grouped into macroblocks, and the filtering operation between the first decoded image block and the previously decoded image block is performed for all boundaries within a macroblock before filtering is performed within the next macroblock in the scanning order.

129. (New) A method according to claim 121, wherein the digital image comprises a plurality of segments of image blocks and the filtering is performed due to boundaries between adjacent decoded image blocks that belong to the same segment.

130. (New) An encoder for encoding a digital image comprising a plurality of image blocks, the encoder comprising:

means for encoding a first image block to form a first encoded image block;

means for decoding the first encoded image block to form a first decoded image block;

means for performing a filtering operation across a block boundary between the first decoded image block and a previously decoded image block adjacent to the current decoded image block, such that pixel value of at least one decoded pixel in the first decoded image block is modified by the filtering operation; and

means for performing a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first block by the filtering operation.

131. (New) A decoder for decoding an encoded digital image comprising a plurality of encoded image blocks, the decoder comprises:

means for decoding a first encoded image block to form a first decoded image block;

means for performing a filtering operation across a block boundary between the first decoded image block and a previously decoded image block adjacent to the first decoded image block, such that pixel value of at least one decoded pixel in the first decoded image block is modified by the filtering operation; and

means for performing a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first block by the filtering operation.